

Irrational Numbers Worksheet

Part A: Identify Rational or Irrational: Write **R** for Rational and **I** for Irrational.

1. _____ $\sqrt{16}$

5. _____ -3

9. _____ $\sqrt{50}$

2. _____ $\sqrt{7}$

6. _____ $\sqrt{81}$

10. _____ 2.5

3. _____ 0.25

7. _____ $\sqrt{10}$

4. _____ π

8. _____ $1.333333...$

Part B: Determine Whether Each Number is Irrational - Circle **Yes** if the number is irrational and **No** if it is rational.

Number **Irrational?**

11. $\sqrt{2}$ Yes / No

12. $5/8$ Yes / No

13. $\sqrt{36}$ Yes / No

14. π Yes / No

Number **Irrational?**

15. $0.121221222...$ Yes / No

16. -7 Yes / No

17. $\sqrt{11}$ Yes / No

18. 4.75 Yes / No

Part C: Simplify Square Roots - Simplify each radical.

19. $\sqrt{25} =$ _____

21. $\sqrt{64} =$ _____

23. $\sqrt{121} =$ _____

20. $\sqrt{49} =$ _____

22. $\sqrt{100} =$ _____

24. $\sqrt{144} =$ _____

Part D: Estimate Irrational Numbers - Estimate each irrational number to the nearest whole number.

25. $\sqrt{5} \approx$ _____

27. $\sqrt{30} \approx$ _____

29. $\sqrt{90} \approx$ _____

26. $\sqrt{18} \approx$ _____

28. $\sqrt{70} \approx$ _____

30. $\sqrt{200} \approx$ _____

Part E: Compare Irrational Numbers - Use **<**, **>**, or **=**.

31. $\sqrt{2}$ _____ 1

33. $\sqrt{50}$ _____ 7

35. $\sqrt{10}$ _____ 3

32. $\sqrt{16}$ _____ 4

34. $\sqrt{81}$ _____ 9

36. π _____ 3

Part F: Word Problems

37. A square garden has an area of 64 square feet. What is the length of one side?

Answer: _____ feet

38. A square tile has an area of 49 square inches. What is the length of one side?

Answer: _____ inches

39. A square room has an area of 20 square meters. Is the side length rational or irrational?

Answer: _____